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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN R. ARTHUR and GARY D. TARVER

Appeal 2009-004956
Application 10/677,024
Technology Center 1700

Decided: January 25, 2010

Before JEFFREY T. SMITH, MICHAEL P. COLAIANNI, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's non-final rejection¹ of claims 1 and 9 through 11. Claims 2

¹ Appellants' statement at page 4 of the Appeal Brief that they appeal from the Examiner's final rejection is harmless error since it is apparent from the record that the claims on appeal have been twice rejected. 35 U.S.C. § 134(a)(“[a]n applicant for a patent, any of whose claims has been twice rejected, may appeal from the decision of the primary examiner to the Board

through 8 are objected to as being dependent upon a rejected base claim, but are indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 12 through 31 are indicated to be allowable. We have jurisdiction pursuant to 35 U.S.C. § 6.

We AFFIRM.

STATEMENT OF CASE

The subject matter on appeal is directed to a method of forming an interface between components having different rates of volumetric expansion. Claim 1 is illustrative:

1. A method of forming an interface between components having different rates of volumetric expansion, said method comprising forming an interface surface of said interface with respect to a center of growth such that slippage occurs at said interface between said components during volumetric expansion.

As evidence of unpatentability of the claimed subject matter, the Examiner relies upon the following references:

Bennett	3,577,795	May 4, 1971
Piascik	6,677,069 B1	Jan. 13, 2004
Ito	JP 04-355953	Dec. 9, 1992

The Examiner maintains the following rejections:

- 1) Claim 1 under 35 U.S.C. § 102(b) as anticipated by Ito;
- 2) Claims 1 and 9 under 35 U.S.C. § 102(b) as anticipated by Bennett;
and

of Patent Appeals and Interferences.”).

3) Claims 1 and 9-11 under 35 U.S.C. § 103(a) as unpatentable over Piascik and Bennett.

With respect to rejection (1), Appellants argue claim 1, which is the only claim rejected. With respect to rejections (2) and (3), Appellants' arguments focus on claim 1. Accordingly, we address Appellants' arguments regarding the rejections with respect to claim 1 only. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2009). Unargued dependent claims stand or fall with the claim from which they depend.

Rejections (1) and (2): The § 102 rejections over Ito and Bennett

ISSUE

Have Appellants shown reversible error in the Examiner's findings that Ito and Bennett individually teach forming an interface with respect to a center of growth as required by claim 1? We decide this issue in the negative.

FINDINGS OF FACT

1. The Specification discloses that "[t]he center of growth is a point at which two or more planes containing a portion of an interface or interfaces between two components intersect." (Spec. ¶ [0015]). The Specification also discloses that "[t]he center of growth (120) is also a point that will be at the intersection of two or more planes which each include a portion of one or more interface surfaces between components." (Spec. ¶ [0020]).

2. The Specification also discloses that "the center of growth (130) is the intersection of the lines drawn along interfaces between the components." (Spec. ¶ [0026]). The Specification discloses that these interfaces may "act as shear planes whereby the components slip with respect to each other when expansion and contraction occurs." (Spec. ¶ [0027]).
3. Appellants do not specifically dispute the Examiner's findings that the individual teachings of Ito and Bennett meet the center of growth feature as interpreted by the Examiner. In this regard, Appellants do not specifically dispute the Examiner's finding that

[t]he Ito reference discloses a method of dispersing stress by forming an interface between . . . components having different rates of thermal expansion (molybdenum plate "15" and copper plate "8") such that . . . a slide occurs at an interface between plates "8" and "15" . . . wherein a point on the interface is construed as being a center of growth.
(Compare Ans. 3 with App. Br. 8-12 and Reply Br. 2-7). In addition, Appellants do not specifically dispute the Examiner's finding that

[t]he Bennett reference discloses a method of forming an interface between components having different rates of thermal expansion (carbide blank "42" and steel shaft "44") such that the interface between components [is such that] . . . one component slides upon the other component during expansion. . . . It also discloses a method of determining the total resultant expansion of interface point "62" (center of growth).
(Compare Ans. 3 with App. Br. 8-12 and Reply Br. 2-7).

PRINCIPLES OF LAW

"During examination, 'claims . . . are to be given their broadest reasonable interpretation consistent with the specification, and . . . claim language should be read in light of the specification as it would be

interpreted by one of ordinary skill in the art.'" *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(quoting *In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990)). As also stated in *In re Morris*:

[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification.

127 F.3d 1048, 1054 (Fed. Cir. 1997).

"[O]ne cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references." *In re Keller*, 642 F.2d 413, 425-26 (CCPA 1981).

ANALYSIS AND CONCLUSION

Appellants argue that the Examiner "confuses center of growth with a point at the interface. . . . As clearly shown in the example of Fig. 2B from Appellant's specification, a center of growth (130) may *not* be a point at the interface between components." (App. Br. 11).

To address this argument, we begin by construing the claim phrase "center of growth." The phrase "center of growth" is not expressly defined in the Specification. However, the Specification discloses at paragraph [0015] that a "center of growth is a point at which two or more planes containing a portion of an interface or interfaces between two components intersect" (e.g., a point along the interface between two components). (FF 1). In addition, the Specification discloses at paragraphs [0026]-[0027] that a "center of growth (130) is the intersection of the lines drawn along

interfaces between the components" (e.g., a point or collection of points along an interface between two components). (FF 2). According to Appellants, these interfaces may "act as shear planes whereby the components slip with respect to each other when expansion and contraction occurs." (FF 2).

Based on these facts, we, like the Examiner, determine the broadest reasonable meaning of "center of growth" in light of the Specification is a point or collection of points on an interface between two components. Indeed, the Examiner's interpretation at page 3 of the Answer that "forming an interface between two plates wherein a point on the interface is construed as being a center of growth" is consistent with the proper construction of this disputed claim term. *See Morris*, 127 F.3d at 1054. In other words, the Examiner properly interprets the phrase "center of growth" as including a point on the interface between two plates. Since Appellants have provided no persuasive argument as to why this interpretation is in error, Appellants' argument is unpersuasive of reversible error.

Appellants also argue that "[t]here is no . . . reference of record that teaches or suggests what a 'center of growth' is as defined and claimed by the Appellant[s]." (App. Br. 8). However, based on the Examiner's proper construction of "center of growth" to include a point on the interface, the Examiner finds that the individual teachings of Ito and Bennett meet the center of growth feature required by claim 1. (FF 3). Appellants have not shown these findings to be erroneous.

Appellants next argue that "[t]he Action has not alleged or explained how Ito anticipates the claimed method in which a center of growth is first determined and so that 'forming an interface surface of said interface' can

then be performed 'with respect to [the] center of growth.'" (App. Br. 9). In addition, Appellants argue that "Ito does not teaching [sic] anything about the act of forming an interface. Rather, Ito merely describes an interface that has already been formed." (App. Br. 10). Appellants also argue that

Because Bennett, like all the other prior art of record, does not teach or suggest Appellant's concept of a center of growth, Bennett cannot teach or suggest the claimed method in which a center of growth is first determined for a proposed interface between components so that the subsequent method step of "forming an interface surface of said interface" can then be performed "with respect to [the] center of growth."

(App. Br. 11-12).

Appellants, however, do not specifically dispute the Examiner's findings that Ito and Bennett individually teach these claim features. (FF 3). Indeed, based on the Examiner's proper claim construction of "center of growth," Appellants have not shown reversible error in the Examiner's finding that "[t]he Ito reference discloses a *method of* dispersing stress by *forming* an interface between . . . components having different rates of thermal expansion . . . wherein a point on the interface is construed as being a center of growth" as that term is properly construed. (FF 3)(emphasis added). Nor do Appellants specifically dispute the Examiner's finding that "[t]he Bennett reference discloses a *method of forming* an interface between components having different rates of thermal expansion . . . [wherein] interface point '62' [is the] . . . center of growth." (FF 3)(emphasis added). In other words, Appellants have not shown reversible error in the Examiner's finding that Ito and Bennett disclose taking account of the center of growth when forming an interface between components.

Thus, it follows that Appellants have not shown reversible error in the Examiner's findings that Ito and Bennett individually teach forming an interface with respect to a center of growth as required by claim 1.

Rejection (3): The § 103 rejection over Piascik and Bennett

Appellants argue that "Piascik does not teach or suggest anything about a center of growth or a *method* of forming an interface with respect to a center of growth." (App. Br. 12). It is well settled that one cannot show non-obviousness by attacking the references individually when the rejection is based on a combination of references. *See Keller*, 642 F.2d at 425-26. In this case, the Examiner relies on Bennett and not on Piascik to teach this disputed claim feature. (Ans. 4-5). As noted above, based on the Examiner's proper claim construction of "center of growth," Bennett teaches the disputed feature as noted earlier in this opinion.

In addition, Appellants refer to the arguments made in connection with rejection (2). (App. Br. 12-13). For the reasons discussed above, Appellants have not established that the Examiner reversibly erred.

DECISION

For the above reasons, we sustain the Examiner's rejections. Accordingly, the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(2009).

AFFIRMED

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